



F&J SPECIALTY PRODUCTS, INC.

The Nucleus of Quality Air Monitoring Programs

TRITIUM COLLECTION SYSTEM F&J MODEL TCS-5000

NOTABLE FEATURES:

- Microprocessor controlled electronics
- Flow rate measurements and volume totalizations are corrected to a factory settable reference Temperature and Pressure
 - Classical STP 0°C, 1 Atm
 - Normal T and P 20°C, 1 Atm
 - Modified Normal T and P 70°F, 1 Atm
 - Standard Ambient T and P 25°C, 1 Atm
- RS-232 Port
- LED Display
- Precision machined orifice
- Flow rate accuracy within $\pm 4\%$ F.S.
- Flow rate / Volume Options:
 - sccm / scc
 - SLPM / SL
- 110-120VAC; 50/60Hz, single phase



GENERAL DESCRIPTION:

Model TCS-5000 is a portable tritium collection system consisting of a diaphragm pump, an electronic motor speed control and a removable polycarbonate indicating Silica Gel column. The flow and volume of air passing through the system is measured by a microprocessor controlled Digital Flow meter (DFM). The DFM utilizes a precision-machined orifice to measure flow rate. The DFM displays on-board calculations on a bright large character LED display screen. Data download capability is available through the RS232 port on a real-time basis.

The unit is designed for continuous indoor use and weather protected outdoor use. Please consult the product specifications for the design temperature range and the installation category.

The typical operating flow range is 100-400 cc/min (0.10 - 0.4 LPM).

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TCS-5000 Tritium Collection System (110 – 120VAC)

SPECIFICATIONS:

PUMP TYPE: Diaphragm

CAPACITY: Minimum 100 cc/min; Maximum 400 cc/min.

POWER REQUIREMENTS: 110 – 120VAC; 50/60 Hz; 1 ampere; single phase

CIRCUIT BREAKER PROTECTION: 5 amperes

ELECTRICAL CORD: All temperature, 3-wire, 16 gauge

DIMENSIONS: 16 ½ "L × 12 "W × 15"H (42L × 30.5W × 38 cm H)

WEIGHT: 12.5 lbs. (5.7 Kgs.)

INSTALLATION CATEGORY: Pollution Degree 2

ELECTRONIC SPECIFICATIONS

MEASUREMENT ACCURACY

Air flow: ± 4% of Full Scale (F.S.)
Temperature: ± 0.9°F (0.5°C) (Not displayed)
Barometric Pressure: ±0.6 inches Hg (Not displayed)

OPERATING TEMPERATURES: 32° to 104°F (0° To 40°C)

STORAGE TEMPERATURE: -20° To 122°F (-28° To 50°C)

CALIBRATION: Calibration-verification once per year; Factory calibration as needed.

COMMUNICATIONS INTERFACE: RS-232 available for realtime data download.

ON-BOARD CALCULATIONS

- Flow calculation from differential pressure value corrected to a reference T and P
- Elapsed Time
- Cumulative Volume corrected to a reference T and P

OPTIONS: Data Storage Device — 232FCDS
2 GB Secure Digital Card — 372239
PC Flash Card Reader — SDDR-199-A20

Note: Other tritium absorbing media may be utilized such as molecular sieve or water.